APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,847	04/27/2001	Pedro S. de Souza	020431.0862	2784

7590   01/20/2004

Christopher W. Kennerly
Baker Botts L.L.P.
Suite 600
2001 Ross Avenue
Dallas, TX 75201

EXAMINER
TO, BAOQUOC N

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/844,847	DE SOUZA ET AL.
	Examiner	**Art Unit**
	Baoquoc N To	2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

U.S. Patent and Trademark Office

PTO-326 (Rev. 04-01)   Office Action Summary   Part of Paper No. 2

DETAILED ACTION

1.   Claims 1-32 presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by

Nwabueze (US. Patent No. 6,611,839).

Regarding on claim 1, Nwabueze teaches a system for optimization using multi-

dimensional data, comprising:

Using a multi-dimensional data model (OLAP cube), organize data stored at one

or more data storage locations, the multi-dimensional data model including a plurality of

data dimension each including a hierarchy of members (the number people visits to a

set site in a day, week month or year time frame) (col. 6, lines 60-65);

Receiving input from a user specifying a problem instance to be solved using an

optimization engine (user request report) , the problem instance specified by the user in

a multidimensional format, the optimization engine being unable to solve the problem

instance in the multi-dimensional format (col. 6, lines 39-46); and

Communicate the problem instance in the multi-dimensional format (data

acquisition engine acquires the desired data from the various data sources) (col. 7, lines

49-50); and

Transform module (a data transforming) (col. 8, lines 30-32) operable to:

Communicate the problem instance in the multi-dimensional format (col. 6,

lines 39-46);

Transform the problem instance into a format appropriate for the

optimization engine (col. 8, lines 30-34); and

Communicate the transformed problem instance to the optimization

engine to be solved (col. 9, lines 10-15).

Regarding on claim 2, Nwabueze teaches the transformation module is further

operable to:

Receive a solution associated with the problem instance from the optimization

engine (col. 6, lines 39-46);

Transform the solution into the multi-dimensional format (col. 9, lines 30-35); and

Communication the transformed solution to the server (col. 8, lines 33-39).

Regarding on claim 3, Nwabueze teaches a business repository operable to

store the multi-dimensional data model, the server further operable to communicate with

the business repository to access data specified using the multi-dimensional format (col.

6, lines 56-65).

Regarding on claim 4, Nwabueze teaches transforming (transforming) the

problem instance comprises:

Parsing (the data transforming engine will identify and open each file of the pre-

process acquired data) the received problem instance to identify pre-defined

multidimensional syntax (col. 8, lines 33-37); and

Translating (transforming) the multi-dimensional syntax (various data sources

and varying data formats) to a syntax (uniform format) appropriate for the optimization

engine (col. 8, lines 30-33).

Regarding on claim 5, Nwabueze teaches transforming (transforming) the

problem instance comprises generating multiple problem constraints (various sources

data) in a format appropriate for the optimization engine from a single problem (a

uniform format) (col. 8, lines 30-42) constraint included in the received problem

instance, the single problem constraint identifying a member in each data dimension to

which the constraint is applicable (col. 8, lines 30-42).

Regarding on claim 6, Nwabueze teaches transforming the problem instance

comprises importing data applicable to the problem instance from one or more data

storage locations, the imported data being included in the transformed problem instance

in a format appropriate for the optimization engine (col. 8, lines 33-37).

Regarding on claim 7, Nwabueze teaches the problem instance comprises:

A problem domain that includes all data in the multi-dimensional data model that
· is located hierarchically below one or more specified intersections in the multi-

dimensional data model, each intersection identified by specifying a member in each

data dimension (intersection) (col. 7, lines 7-13);

An evaluation level specified by identifying a particular level in the hierarchy of

each data dimension (80 percent for politic page same 70 percent for sport page) (col.

7, lines 8-13);

An objective function including a data measure or a combination of data of each

data dimension (col. 7, lines 13-17);

One or more problem constraints (various data format) (col. 7, lines 49-50).

Regarding on claim 8, Nwabueze teaches one or more data measures included

in the objective function have an associated data value in a data storage location for

each of one or more intersections (intersection) in the problem domain (col. 7, lines 7-

8).

Regarding on claim 9, Nwabueze teaches the objective function further

comprises an aggregation (aggregation engine) domain for each data measure (col. 8,

lines 52-55).

Regarding on claim 10, Nwabueze teaches the server is further operable to replicate (converts) a single constraint (a uniform format) in the multi-dimensional format into multiple constraints in the multi-dimensional format, the single constraint including one or more coverage sets identifying multiple members of one or more data dimensions (day, week and year) (col. 6, lines 60-67) to which the constraint applies (col. 8, lines 30-43).

Regarding on claims 11, 20 and 29, Nwabueze teaches a method for optimization using multi-dimensional data, comprising:

Receiving a problem instance to be solved using a optimization engine (dynamic report), the problem instance specified in a multi-dimensional format (various data sources) (col. 7, lines 49-50) associated with a multi-dimensional data model that includes a plurality of data dimensions each including a hierarchy of members (descriptive categories or business metrics (dimensions) and quantitative (measures) (col. 6, lines 60-63), the optimization engine being unable to solve problem instance in the multi-dimensional format (convert to a uniform format) (col. 8, lines 30-43);

Using a transformation module (data transform module) (col. 8, line 31), transforming the problem instance (transforming pre-processed data from the various data sources) into a format (a uniform format) appropriate for the optimization engine (col. 8, lines 30-33); and

Communicating (a data acquisition engine acquires the desired data from various

source) the transformed problem instance to the optimization engine to be solved (col.

7, lines 49-52).

Regarding on claim 12 and 21, Nwabueze teaches receiving a solution

associated with the problem instance from the optimization engine; and

Using the transformation module (data transform module), transforming the

solution into the multi-dimensional format (col. 8, lines 31-43).

Regarding on claims 13 and 22, Nwabueze teaches the transforming the problem

instance comprises:

Parsing (the data transforming engine will identify and open each file of the

preprocess acquired data) the received problem instance to identify pre-defined multi-

dimensional syntax (col. 8, lines 33-37); and

Translating (transforming) the multi-dimensional syntax (various data sources

and varying data formats) to a syntax (uniform format) appropriate for the optimization

engine (col. 8, lines 30-33).

Regarding on claims 14 and 23, Nwabueze teaches the transforming

(transforming) the problem instance comprises generating multiple problem constraints

(various sources) in a format appropriate (a uniform format) for the optimization engine

form a single problem constraint included in the specified problem instance, the single

problem constraint identifying a member in each data dimension to which the constraint is applicable (col. 8, lines 30-42).

Regarding on claims 15 and 24, Nwabueze teaches transforming the problem instance comprises importing (acquisition engine acquires data from various sources) data applicable to the problem instance from one or more data storage locations, the imported data being included in the transformed problem instance in a format appropriate for the optimization engine (col. 7, lines 49-50).

Regarding on claims 26 and 25, Nwabueze teaches the problem instance comprises:

A problem domain that includes all data in the multi-dimensional data model (OLAP) (col. 6, lines 56-67) that is located hierarchically below one or more specified intersections in the multi-dimensional data model, each intersection identified by specifying a member in each data dimension (intersection is day week month) (col. 6, lines 56-67);

An evaluation level specifies by identifying a particular level in the hierarchy of each data dimension (80 percent for politic page same 70 percent for sport page) (col. 7, lines 8-13);

An objective function including a data measure or a combination of data measures to be optimized (col. 7, lines 13-17); and

One or more problem constraints (from various data format) (col. 7, lines 49-50).

Regarding on claims 17 and 26, Nabueze teaches one or more data measures included in the objective function have an associated data value in a data storage location for each of one or more intersections (intersection) in the problem domain (col. 7, lines 5-10).

Regarding on claims 18 and 27, Nwabueze teaches the objective function further comprises an aggregation (a data aggregating) domain for each data measure (col. 8, lines 52-55).

Regarding on claims 19 and 28, Nwabueze teaches automatically replicating (converts) a single constraint in the multi-dimensional format into multiple constraints in the multi-dimensional format, the single constraint including one or more coverage sets identifying multiples members of one or more data dimension to which the constraints applies (col. 6, lines 60-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Nwabueze (US. Patent No. 6,611,839).

Regarding on claims 30-32, Nwabueze teaches a system for optimization using

multi-dimensional data, comprising:

A sever to operable to:

Using a multi-dimensional data model (OLAP), organize data stored at

one or more data storage locations, the multi-dimensional data model including a

plurality of data dimensions each including a hierarchy of members (the number people

visits to a sit in a day, week or year time frame) (col. 6, lines 60-65);

Receiving input from a user specifying a problem instance to be solved

using an optimization engine (user request report), the problem instance specified by

the user in a multi-dimensional format, the optimization engine being unable to solve the

problem instance in the multi-dimensional format, the problem instance including (col. 6,

lines 60-65);

A problem domain that includes all data in the multidimensional

data model that is located hierarchically below one or more specified intersections in the

multi-dimensional data model, each intersection (intersection) identified by specifying a

member in each data dimension (col. 7, lines 7-8);

An evaluation level specified by identifying a particular level in the

hierarchy of each data dimension (80 percent for politic page same 70 percent for sport

page) (col. 7, lines 8-13);

An objective function including a data measure or a combination of data measures to be optimized (col. 7, lines 13-17); and

One or more problem constraints (various data format) (col. 7, lines 49-50); and

Communicate the problem instance in the multi-dimensional format (data acquisition engine acquires the desired data from the various data sources) (col. 7, lines 49-50);

And

A transformation module operable to (data transform engine) (col. 8, lines 30-31):

Receive the problem instance in the multi-dimensional format (col. 6, lines 39-46);

Transform (transforming) the problem instance into a format appropriate for the optimization engine, the transformation including parsing the received problem instance to identify pre-defined multi-dimensional syntax (pre-processed data from the various data sources) and translating (transforming) the multi-dimensional syntax (various data sources) to a syntax (a uniform format) appropriate for the optimization engine (col. 8, lines 30-34);

Communicate the transformed problem instance to the optimization engine to be solved (col. 8, lines 33-39);

Receive (return) a solution associated with the problem instance from the optimization engine (col. 8, lines 37-42);

Nwabueze does not explicitly teach transform the solution into the multi-dimensional format; and communicate the transformed solution to the server. Nwabueze discloses the use of transferring the processed data to temporary database by applying rules in order to get the desired result where the desired report or data set request by the customer is generated, wherein customer defines the desired report or data set in the customer user profile, where the data is presented in the desired format" (col. 13, lines 65-67 and col. 14, lines 1-3). This implication teaches the report is the solution that is being requested by the client from the server and the report is displayed in the multidimensional format. Therefore, it would have been obvious to one ordinary skill in the art the time of the invention was made to modify Nwabueze's system by incorporating the include requested report to be displayed into the multidimensional format in order to provide a solution into the multi-dimensional format.

Conclusion

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached at (703) 305-4393.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

- (703) 746-7238   [After Final Communication}]
- (703) 746-7239   [Official Communication]
- (703) 746-7240   [Non-Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II

2121 Crystal Drive

Arlington, VA 22202

Fourth Floor (Receptionist).

Baoquoc N. To

Oct 28, 2003

JEAN M. CORRIELUS

PRIMARY EXAMINER